

6-14-1999

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County Agent's Notes:

June 14, 1999

Irrigation may be needed for gardens.

Weather information sources are saying that we are around six to seven inches below our normal rainfall level for this time of year. Even though every afternoon seems to bring showers to the region, some gardens may need supplemental water to maintain production. The decision as to when and how much to water has always been difficult, but there are a few simple guidelines which may help remove some of the confusion.

The timing of irrigation is a very complex subject on which tremendous amounts of research money is spent. There are dozens of devices which can be used to determine when and how much to irrigate but the best way is to watch plants and observe how they react. Corn, for example, has a very distinctive way of saying "I'm thirsty". The leaves roll into a tube as a way of limiting the flow of air across the leaf surface, conserving the limited supply of water available to the plant. There are usually spots in every corn field which show this leaf-rolling symptom earlier than the bulk of the field, indicating that water shortages are likely to increase and that irrigation should be started. Those who have corn in your gardens may use this sign as an indicator of when to water the entire garden.

Another method for estimating soil moisture is to dig into the soil to the depth that plants have developed roots and check the soil at that depth by attempting to make a "mudball" in your hand. When there is enough moisture to allow the soil to be made into a ball that will stay together, there is usually enough water for plants to grow well. On the other hand, if the ball

quickly falls apart in your hand, there may be need for irrigation. This is a very subjective test and should be done in more than one spot in the garden before deciding to add water.

Many people water too much and too often, actually causing more damage than benefit to garden crops. Plants which receive water too early and too often may become “addicted”, and not be able to produce without irrigation. Plants develop roots only as needed, so when extensive roots are not needed, they are not grown. Allow your plants to form good root systems before starting to water, then you will need to water less frequently.

After you have made the decision to irrigate, don’t play around with it. Do your best to mimic a good rain so that your plants can continue normal growth. I think most of you would agree that two inches of rain can be considered a “good” rain. Two inches of rain on an acre of land is around 40,000 gallons of water. Normal water use is between a quarter and a half inch per day, so the equivalent of a two inch rain should supply plants for about a week even if there is no rain. For a tenth acre size garden you would have to put on 4,000 gallons to duplicate a two-inch rain; this may not be possible for some. You will need to keep up with the rainfall you get with a gauge and supplement with irrigation to supply your plants with at least a quarter inch per day.

By all means do not water constantly because in so doing you will drown your plants. They need periods of drying to allow roots to get oxygen, and to allow for uptake of plant nutrients which are not well absorbed from soil that is too wet. As I said earlier, try to mimic or duplicate a good rain and then leave it alone for a few days. This is the way nature works most of the time, and this is the way plants grow best.

One good way to irrigate is to water a tenth of your garden every day during a dry period; this way the same row gets water every ten days. When you get rain just stop watering and wait

three to four days for every inch of rain you received; then resume watering where you left off last time. This way you should be able to keep up with water needs without overwatering.

The same principles work for lawns and ornamental plants too. When you water, soak the soil until water begins to run off, indicating that soil is saturated, then don't water again until this water has been used.

Farmers' Market participants have found eager customers, and sales have been good. Our hope is that as summer crops begin to produce, more and more growers will come to the Square to sell on Friday mornings. We are starting to see more beans, cucumbers, and a few tomatoes. Squash are still plentiful, and corn will likely start coming in soon. Come and check it out every Friday morning starting at 7:00.